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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/552,163	06/27/2006	Vittorio Orlandi	82062-0177	9197

24633 7590 01/26/2009
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EXAMINER

STEELE, JENNIFER A

ART UNIT	PAPER NUMBER
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1794

NOTIFICATION DATE	DELIVERY MODE
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01/26/2009

ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

dcpatent@hhlaw.com
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Office Action Summary	Application No. 10/552,163	Applicant(s) ORLANDI ET AL.	
	Examiner JENNIFER STEELE	Art Unit 1794	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 17 October 2008.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-51 is/are pending in the application.
- 4a) Of the above claim(s) 1-38 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 39-51 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>10/11/2005</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Election/Restrictions

1. Claim 1-38 withdrawn from further consideration pursuant to 37 CFR 1.142(b), as being drawn to a nonelected Process of Making a Nonwoven, there being no allowable generic or linking claim. Applicant timely traversed the restriction (election) requirement in the reply filed on 10/17/2008.
2. Applicant argues that PCT Rule 13 shall be construed as permitting the inclusion of any one of the following combinations of claims of different categories in the same international application: (A) In addition to an independent claims for a given product, an independent claims for a process specially adapted for the manufacture of the said product" wherein "a process is specially adapted for the manufacture of a product if it inherently results in the product." Applicant states that as claims 39 and 40 are directed to a nonwoven produced by the process recited in claims 1 and 8 respectively and as such the processes in Group I are "specially adapted for the manufacture" of the products. As the claims have the special technical feature of split fibers the restriction is proper. It should be noted that even though product-by-process claims are limited by and defined by the process, determination of patentability is based on the product itself. The patentability of a product does not depend on its method of production. If the product in the product-by-process claim is the same or an obvious variant from a product of the prior art, the claim is unpatentable even though a different process made the prior product. In re Thorpe, 227 USPQ 964,966 (Fed. Cir. 1985). The burden has

been shifted to the Applicant to show unobvious differences between the claimed product and the prior art product. In re Marosi, 218 USPQ 289,292 (Fed. Cir. 1983).

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

3. Claim 47 and 48 recites the limitation "the final content of the cellulose pulp fiber is between 50% and 75%" in claims 47 and 48. There is insufficient antecedent basis for this limitation in the claim. The independent claims 39 and 40 describe one layer (T₁) of splittable or exploded polymer fibers. It is not clear if the pulp fibers are an additional component in the layer of the splittable or exploded polymer fibers or an additional layer of the splittable or exploded polymer fibers layer. The specification and drawings show the pulp fibers to be an additional layer. Claims 47 and 48 are indefinite as to how the pulp fibers are incorporated into the structure of the nonwoven.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.

4. **Claim 39-46, 51 and 52 rejected under 35 U.S.C. 102(b) as being anticipated by Marmon et al (US 6,200,699).** Claim 39 describes a hydroentangled single of multi-layer nonwoven produced by a process comprising the steps of:

- Preparing at least one layer (T_1) of splittable multicomponent polymer fibers and
- Hydroentangling said at least one layer such as to obtain a nonwoven where the multicomponent polymer fibers are split into monocomponent microfibers entangling with one another.

Marmon teaches a nonwoven web fabricated by forming multicomponent fibers that are bonded and then hydroentangled such that the entangling process separates the individual segments of the multicomponent fibers into microfibers (ABST). Marmon teaches multicomponent fibers are comprised of at least two components and the components become separated into the individual components to form an entangled web (col. 2, lines 36-41).

As to claim 40, the separation of the multicomponent fibers into the microfibers is equated with exploding the fibers.

As to claims 43-46, Marmon teaches that microfibers are from about 3 to about 8 microns (col. 3, lines 54-67) and in the range of claims 45 and 46. Marmon teaches that micron can be converted into the units of denier where 15 micron equals 1.42 denier (col. 4, lines 1-4). Therefore the 3 to 8 micron fibers are equal to 0.06 to 0.4 denier which is equivalent to 0.07 to 0.44 dtex in the in the range of claims 43 and 44.

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As to claims 51 and 52, these claims are drawn to statements of use and do not distinguish the claims from prior art of Marmon. However, Marmon teaches a single or multi-layer nonwoven comprised of splittable multicomponent filaments and Marmon teaches employing the splittable filaments with other layers and with absorbent materials.

5. **Claim 39-46, 51 and 52 rejected under 35 U.S.C. 102(a) as being anticipated by Vonfeldt et al (US 6,739,023).** Vonfeldt teaches a method of forming a nonwoven composite fabric that includes the steps of providing a first layer of splittable continuous fibers, splitting the fibers into split filaments and superimposing a second layer of staple fibers and entangling the first and second layers together (ABST). Vonfeldt teaches the splittable fibers are multicomponent fibers (col. 2, lines 37-42). Vonfeldt teaches the fibers are hydroentangled (col. 2, lines 8-21).

As to claim 40, splittable fibers are equated with exploded fibers.

As to claim 41-46, Vonfeldt teaches a layer of split fibers and a layer of staple fibers and teaches the split fibers have a denier less than about 0.7 and less than about 0.1 and less than 0.01. A denier of less than 0.7 is a micro-fiber layer as claims 43-46 describe the size of the micro-fibers are between 0.1 to 0.9 dtex and between 1 and 5 micron. Less than 0.7 denier is in the range of claims 43-46.

As to claims 51 and 52, these claims are drawn to statements of use and do not distinguish the claims from prior art of Vonfeldt. However, Vonfeldt teaches a single or multi-layer nonwoven comprised of splittable multicomponent filaments and Vonfeldt

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teaches employing the splittable filaments with other layers and with absorbent materials such as cellulose pulp fibers.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

6. Claim 47 and 48 rejected under 35 U.S.C. 103(a) as being unpatentable over Marmon (US 6,200,699) in view of Everhart (US 5,284,703).

As to claims 47 and 48, Marmon teaches the fabric has basis weight of 1.5 osy and 2.0 osy in examples 3 and 1 which is equivalent to 51 gsm and 67 gsm and in the range of claims 47 and 48.

Marmon teaches the grab tensile strength of the fabric as a function of the hydroentangling energy used to form the fabric. Marmon teaches the grab tensile strength in the MD and CD in Fig. 17A and 17B. Marmon teaches the grab tensile

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strength is measured to determine the force to break and the percent stretch before breakage. It is presumed that as Marmon teaches the structure of the current application, the properties of tensile strength and elongation would be inherent to the nonwoven web of Marmon. When the reference discloses all the limitations of a claim except a property or function, and the examiner cannot determine whether or not the reference inherently possesses properties which anticipate or render obvious the claimed invention the examiner has basis for shifting the burden of proof to applicant as in *In re Fitzgerald*, 619 F.2d 67, 205 USPQ 594 (CCPA 1980). See MPEP § 2112-2112.02

Marmon teaches that fibers of the nonwoven web may contain conventional additives and additional materials or components may be added to the web to provide additional functionality such as pulp. Marmon references US Patents 5,284,703 and 5,389,202 issued to Everhart regarding high pulp content hydroentangled nonwoven webs. Marmon does not reference the percentage of pulp fibers in the nonwoven web.

Everhart teaches the high pulp content webs incorporate more than 70% pulp fibers and provide absorbent properties. Everhart teaches the absorbent properties expressed as water wicking and oil absorbency in Tables 1, 2 and 3.

It would have been obvious to employ pulp fibers in the nonwoven web of Marmon motivated by Marmon's reference to Everhart and Everhart's teaching of hydroentangling absorbent pulp fibers in a nonwoven web. As the structure of Marmon in view of Everhart teaches absorbent properties such as water wicking and oil

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absorbency, it is presumed that the property of 600% to 700% absorption power is inherent in the structure of Marmon.

7. Claim 49 and 50 rejected under 35 U.S.C. 103(a) as being unpatentable over Marmon (US 6,200,699) in view of Everhart (US 5,284,703) in further view of Vonfeldt et al (US 6,739,023). As to claims 49 and 50, Marmon teaches the nonwoven can be a three layer type such as an SMS (col. 13, lines 1) or laminated to microporous films or incorporating pulp fibers. Marmon differs and does not teach the structure of the laminate has an inner layer of a cellulose pulp fiber. Marmon teaches nonwoven webs of basis weights of 51 and 67 gsm, and Marmon does not teach layers with basis weights of 11-13 gsm and pulp fiber layer of 26-39 gsm. Marmon differs and does not teach the thickness of the nonwoven material.

Everhart teaches the pulp layer is the inner layer as shown in Fig. 7 of an exemplary absorbent structure suitable for a personal care product such as a diaper below. Layer 106 is the pulp layer and layer 102 is a top layer comprised of a nonwoven web of meltspun fibers or filaments, and layer 104 is a fluid distribution layer and 108 is a bottom layer (col. 10, lines 38-68).

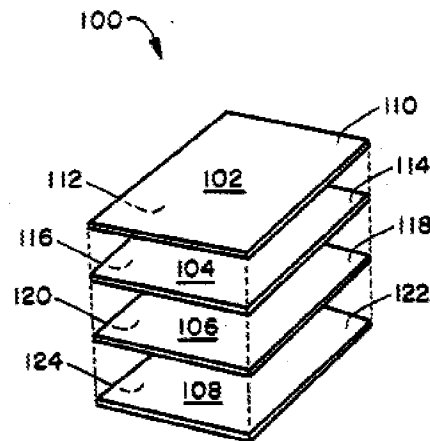


FIG. 7

Everhart teaches the thickness or bulk of the web and presents the results in Table 3. The bulk or thickness for the examples in Table 3 range from 0.022 to 0.023 inches which is equal to 0.56 to 0.58 mm and in the range of the current application.

Vonfeldt teaches a method of forming a nonwoven composite fabric that includes the steps of providing a first layer of splittable continuous fibers, splitting the fibers into split filaments and superimposing a second layer of staple fibers and entangling the first and second layers together (ABST). Vonfeldt teaches the staple fibers are pulp fibers (col. 3, lines 50-55). Vonfeldt teaches the basis weight of the continuous filament web substrate of splittable multicomponent fibers referred to as nonwoven substrate **20**, has a basis weight of 10 to about 35 gsm. Vonfeldt teaches the pulp layer weight as a proportion of the nonwoven substrate layer **20**. Vonfeldt teaches that the ratio of the dry weight of the first layer (layer **20**) and second layer (pulp) ranges from 0.1 to 20. The substrate weight is about 10 to 35, therefore the pulp layer can be calculated to be between 1 gsm and 70 gsm and in the range of the current application.

It would have been obvious to combine the splittable, multicomponent filament layers of Marmon with a pulp layer in a three layer structure of Everhart motivated to produce an absorbent nonwoven. It further would have been obvious to produce an absorbent nonwoven with the basis weights as taught by Vonfeldt motivated to produce a lower weight composite that has the properties of strength, elongation and absorbency. As the combination of references teaches the structure and materials of the current application, it is presumed that the properties of MD and CD tensile strength would be inherent to the combination.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to JENNIFER STEELE whose telephone number is (571)272-7115. The examiner can normally be reached on Office Hours Mon-Fri 8AM-5PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Donald Tarazano can be reached on (571) 272-1515. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/J. S./
Examiner, Art Unit 1794

/Elizabeth M. Cole/
Primary Examiner, Art Unit 1794

1/19/2009